

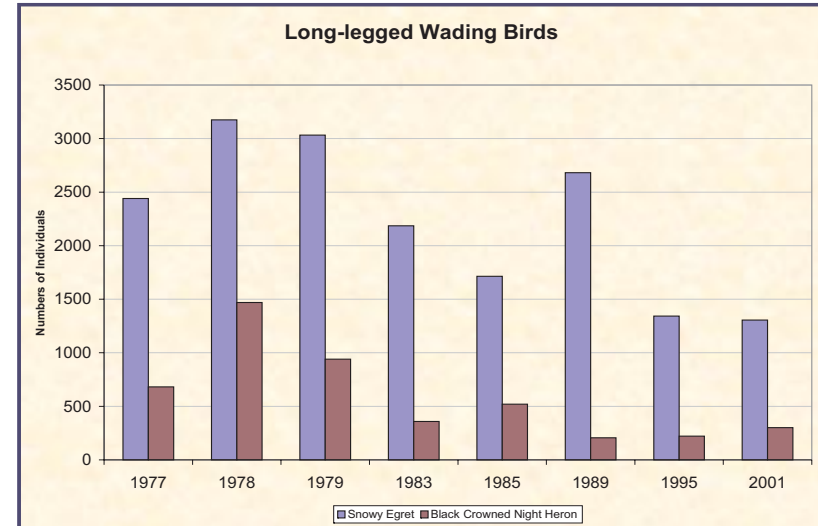
Wildlife Populations: Long-legged Wading Birds

Background

DEP's Division of Fish and Wildlife has monitored the nesting populations of long-legged wading bird species through a combination of ground and aerial surveys for the past two decades. Long-legged wading birds, also known as colonial nesting waterbirds, are prominent members of estuarine ecosystems. They are important predators, feeding near the top of the food chain on a wide variety of forage fish and on marine invertebrates such as small crabs and mollusks. As relatively long-lived, high-level predators, these waterbirds serve as valuable indicators of environmental quality, including resource abundance and health; levels of toxic substances, such as organic contaminants and heavy metals; and levels of human disturbance.

Snowy egrets and black-crowned night herons are particularly good indicators of estuarine systems because they both feed and nest in the Atlantic Coastal ecosystem. The Snowy Egret (*Egretta thula*) can be distinguished from the great egret by its smaller size, its black bill, and yellow feet; the snowy egret can be spotted from spring through fall, often along the edge of the water in a marsh. Found along much of the East Coast and elsewhere in the U.S., snowy egrets spend the winter from South Carolina southward. In the latter part of the 19th century and into the early twentieth, snowy egret plumes were very popular on hats. The result was that these birds were hunted until they were nearly extinct.¹

The Black-crowned Night-Heron (*Nycticorax nycticorax*) is a rather stocky heron with plumage that is gray and white with a distinctive black cap and a pair of white plumes that extend from the back of the head. They usually nest colonially among reeds in marshes, or up to 160 feet above the ground in trees. Their spring migration generally occurs from mid-February through mid-May. Fall migration occurs from mid-July through October. The Black-crowned Night-Heron is widely distributed throughout North America, South America, Eurasia and Africa.²



Trend

Long-term trends for the 25-year period (1977-2001) for these species (see figure below) reveal that both species' populations have declined since 1985. In the past, DEP also tracked populations of the cattle egret and the yellow-crowned night heron along with the Snowy Egret and Black Crowned night heron to serve as indicators of the environmental condition of the estuarine ecosystem. DEP has concluded, however, that these species are not reliable environmental indicators.

The Cattle Egret is more closely associated with upland pasture habitats than with coastal marshes, and as dairy farming in New Jersey has declined, so has the availability of this preferred habitat. The Yellow Crowned Night Heron appears to be changing its nesting behavior, perhaps in response to increasing human disturbances. Yellow-crowned night herons are increasingly found nesting in relatively small, single-species colonies (e.g. three or four nesting pairs) in the midst of human development. Therefore the sampling protocol that relies on surveys of large mixed-species long-legged wading birds nesting colonies may no longer provide a reliable indicator of the population of the Yellow Crowned Night Heron.³

Outlook and Implications

Although the data suggest that the populations of the Snowy Egret and Black Crowned Night Heron have stabilized since 1995, the data also show that the populations have failed to recover from a major decline that occurred between 1978 and 1983. Scientists have found that, like New Jersey's populations, Snowy Egrets and Black-Crowned Night Herons are declining along the Atlantic Coast. Some scientific data suggest these population decreases may be the result of pesticides and other environmental contaminants. Nesting success of all colonial waterbirds can be severely reduced by specific types and excessive levels of human activity. Personal watercraft (e.g., Jet Skis) are a particular concern, as these vehicles interfere with waterbird feeding and nesting activities.

More Information

<http://www.assateague.com/sn-egret.html>

<http://www.mbr-pwrc.usgs.gov/Infocenter/i1970id.html>

<http://www.tpwd.state.tx.us/nature/wild/vertebrate/birds/bcnheron.htm>

<http://www.mbr-pwrc.usgs.gov/Infocenter/i2020id.html>

References

¹ <http://www.assateague.com/sn-egret.html>

² <http://www.tpwd.state.tx.us/nature/wild/vertebrate/birds/bcnheron.htm>

³ Dave Jenkins, Division Of Fish and Wildlife, Endangered and Nongame Species Program, personal communication

Much of the information in this report was provided by the Endangered and Nongame Species Program and the NJDEP publication New Jersey's Environment 2000.